

WHAT IS CLAIMED IS:

- 1 1. A method, comprising:
 - 2 determining that a system is to enter a low-power state;
 - 3 encrypting system context information; and
 - 4 saving the encrypted system context information on a non-volatile storage device.
- 1 2. The method of claim 1, further comprising:
 - 2 compressing the system context information before it is encrypted.
- 1 3. The method of claim 1, further comprising:
 - 2 arranging for the system to enter the low-power state after the encrypted system context information is saved.
- 1 4. The method of claim 1, further comprising:
 - 2 retrieving the encrypted system context information;
 - 3 decrypting the encrypted system context information; and
 - 4 arranging for the system to enter a higher-power state in accordance with the system context information.
- 1 5. The method of claim 1, wherein the system context information is associated with at least one of: (i) an operating system image, and (ii) a memory image.
- 1 6. The method of claim 1, wherein the low-power state is associated with an advanced configuration and power interface sleep state.

1 7. The method of claim 1, wherein the non-volatile storage device comprises at
2 least one of: (i) a hard disk drive, (ii) a hard disk drive partition, (iii) a flash memory unit,
3 (iv) a random access memory having a battery, and (v) a network device.

1 8. The method of claim 1, wherein the system includes a processor and comprises
2 at least one of: (i) a desktop personal computer; (ii) a mobile system, (iii) a workstation,
3 (iv) a server, (v) a set top box, and (vi) a game system.

1 9. The method of claim 1, wherein said encrypting is performed in accordance
2 with at least one of: (i) a system identifier, (ii) a user identifier, (iii) a processor identifier,
3 and (iv) trusted platform module information.

1 10. The method of claim 1, wherein said encrypting is performed by at least one
2 of: (i) a software application, (ii) a hardware device, and (iii) a stream encryption engine.

1 11. The method of claim 1, wherein an operating system writes the system
2 context information into a volatile memory device and said encrypting and saving are
3 arranged by another device that accesses the system context information from the volatile
4 memory device, wherein the other device is associated with at least one of: (i) a basic
5 input/output system, and (ii) an encryption engine associated with a chipset.

1 12. A method, comprising:
2 determining that a system has entered an advanced configuration and power
3 interface S3 sleep state; and

4 arranging for system context information stored in volatile memory to be
5 encrypted and saved in a non-volatile storage device.

1 13. The method of claim 12, further comprising:
2 arranging for the system context information to be compressed before being
3 encrypted.

1 14. An apparatus, comprising:
2 a decision unit to determine that a system is to enter a low-power state; and
3 an encryption engine to encrypt system context information and arrange for the
4 encrypted system context information to be saved on a non-volatile storage device.

1 15. The apparatus of claim 14, further comprising:
2 a compression engine to compress the system context information before it is
3 encrypted.

1 16. An apparatus, comprising:
2 a storage medium having stored thereon instructions that when executed by a
3 machine result in the following:
4 determining that a system is to enter a low-power state,
5 encrypting system context information, and
6 saving the encrypted system context information on a non-volatile storage
7 device.

1 17. The apparatus of claim 16, wherein execution of the instructions further
2 results in:

3 compressing the system context information before it is encrypted.

18. A method, comprising:

2 determining that a system is to enter a low-power state;

3 compressing system context information; and

4 saving the compressed system context information on storage device.

1 19. The method of claim 18, wherein the compressed system context information
2 is saved to a non-volatile storage device.

1 20. The method of claim 18, further comprising:

2 arranging for the system to enter the low-power state after the compressed system
3 context information is saved.

1 21. The method of claim 18, further comprising:

2 retrieving the compressed system context information;

3 uncompressed the compressed system context information; and

4 arranging for the system to enter a higher-power state in accordance with the
5 system context information.

1 22. A computer system, comprising:

2 a hard disk drive; and

3 an apparatus, including:

4 a decision unit to determine that a system is to enter a low-power state,
5 and

6 an encryption engine to encrypt system context information and arrange
7 for the encrypted system context information to be saved on a non-volatile storage
8 device.

1 23. The computer system of claim 22, wherein the apparatus further comprises:

2 a compression engine to compress the system context information before it
3 is encrypted.